

# OPINIONS AND DECLARATIONS RENDERED BY THE INTER- NATIONAL COMMISSION ON ZOOLOGICAL NOMENCLATURE

*Edited by*

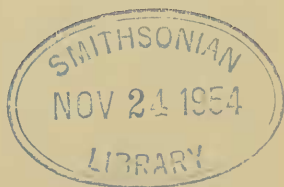
**FRANCIS HEMMING, C.M.G., C.B.E.**

Secretary to the Commission

VOLUME 8. Part 14. Pp. 179—198

## OPINION 297

Validation, under the Plenary Powers, of the generic name *Conchidium* Oehlert, 1887 (Class Brachiopoda) for use in its accustomed sense



**LONDON :**

Printed by Order of the International Trust for  
Zoological Nomenclature

and

Sold on behalf of the International Commission on Zoological  
Nomenclature by the International Trust at its Publications Office  
41, Queen's Gate, London, S.W.7  
1954

Price Nine Shillings and Sixpence

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# INTERNATIONAL COMMISSION ON ZOOLOGICAL NOMENCLATURE

## COMPOSITION AT THE TIME OF THE ADOPTION OF THE RULING GIVEN IN OPINION 297

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### B. The Members of the Commission

(arranged in order of precedence by reference to date of election or of most recent re-election, as prescribed by the International Congress of Zoology).

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Professor Teiso ESAKI (*Kyushu University, Fukuoka, Japan*) (17th April 1950).

Professor Pierre BONNET (*Université de Toulouse, France*) (9th June 1950).

Mr. Norman Denbigh RILEY (*British Museum (Natural History), London*) (9th June 1950).

Professor Tadeusz JACZEWSKI (*Department of Systematic Zoology, Warsaw University, Warsaw, Poland*) (15th June 1950).

Professor Robert MERTENS (*Natur-Museum u. Forschungs-Institut Senckenberg, Frankfurt a. M., Germany*) (5th July 1950).

Professor Erich Martin HERING (*Zoologisches Museum der Humboldt-Universität zu Berlin, Germany*) (5th July 1950).

## OPINION 297

### VALIDATION, UNDER THE PLENARY POWERS, OF THE GENERIC NAME "CONCHIDIUM" OEHLERT, 1887 (CLASS BRACHIOPODA) FOR USE IN ITS ACCUSTOMED SENSE

**RULING** :—(1) It is hereby ruled :—(a) that neither Hisinger (1799) nor Bronn (1848) re-inforced the pre-1758 generic name *Conchidium* by adoption or acceptance (*Opinion 5*) and therefore that that name acquired no rights in zoological nomenclature in virtue of having been published by either of those authors ; (b) that the term *Conchidium*, as published by Wahlenberg in 1821, was not used as a generic name and therefore that the alleged generic name *Conchidium* Wahlenberg, 1821, is a cheironym ; (c) that the generic name *Conchidium* ranks in zoological nomenclature from Oehlert (1887), the first author by whom it was published in conditions which satisfy the requirements of Article 25 of the *Règles*.

(2) Under the Plenary Powers, (a) all selections of type species for the genus *Pentamerus* Sowerby (J.), 1813, made prior to the present Ruling, are hereby set aside ; (b) *Pentamerus oblongus* Sowerby (J. de C.), 1839, is hereby designated to be the type species of the genus *Pentamerus* Sowerby, 1813 ; (c) the specific name *laevis* Sowerby (J.), 1813, as published in the combination *Pentamerus laevis*, is hereby suppressed for the purposes of the Law of Priority but not for those of the Law of Homonymy.

(3) The under-mentioned generic names are hereby placed on the *Official List of Generic Names in Zoology* as Names Nos. 732 and 733 respectively :—(a) *Conchidium* Oehlert, 1887 (gender : neuter) (type species, by original designation : *Anomia bilocularis* Hisinger, 1799) ; (b) *Pentamerus* Sowerby (J.), 1813 (gender : masculine)

(type species, by designation, under the Plenary Powers, under (2)(b) above: *Pentamerus oblongus* Sowerby (J. de C.), 1839).

(4) The under-mentioned generic names and alleged generic names are hereby placed on the *Official Index of Rejected and Invalid Generic Names in Zoology* as Names Nos. 123 to 129 respectively:—(a) the under-mentioned generic names declared under (1)(a) above to possess no status in zoological nomenclature:—(i) *Conchidium* Hisinger, 1799; (ii) *Conchidium* Bronn, 1848; (b) *Conchidium* Wahlenberg, 1821, ruled, under (1)(b) above, to be a cheironym; (c) *Gypidia* Dalman, 1828 (a junior objective synonym of *Pentamerus* Sowerby (J.), 1813); (d) the under-mentioned *nomina nuda*:—(i) *Trimurus* Caldwell, 1934; (ii) *Miopentamerus* Alexander (*née* Caldwell), 1936; (e) *Miopentamerus* Woods, 1937 (a junior objective synonym of *Pentamerus* Sowerby (J.), 1813, as defined under the Plenary Powers, under (1)(c) above).

(5) The under-mentioned specific names are hereby placed on the *Official List of Specific Names in Zoology* as Names Nos. 140 to 142 respectively:—(a) *bilocularis* Hisinger, 1799, as published in the combination *Anomia bilocularis* (specific name of the type species of *Conchidium* Oehlert, 1887); (b) *knightii* Sowerby (J.), 1813, as published in the combination *Pentamerus knightii*; (c) *oblongus* Sowerby (J. de C.), 1839, as published in the combination *Pentamerus oblongus* (specific name of the type species of *Pentamerus* Sowerby (J.), 1813, under the ruling given, under the Plenary Powers, under (2)(b) above).

(6) The under-mentioned specific name is hereby placed on the *Official Index of Rejected and Invalid Specific Names in Zoology* as Name No. 74:—*laevis* Sowerby (J.), 1813, as published in the combination *Pentamerus laevis* and as suppressed, under the Plenary Powers, under (2)(c) above.

## I.—THE STATEMENT OF THE CASE

On 28th March 1947, Dr. F. Elizabeth S. Alexander submitted to the Commission a paper in which she drew attention to the serious confusion which would arise if the *Règles* were to be strictly applied to the names of the Brachiopod genera *Conchidium* and *Pentamerus*, and asked that steps should be taken by the Commission to legalise the current usage of these generic names. For the reasons explained in paragraph 3 below, it was necessary at a later stage to revise and expand this application in certain respects. The definitive application in this case, which was submitted to the Commission by Dr. Alexander on 10th October 1950, was as follows :—

**Proposed use of the Plenary Powers to prevent the confusion which would result, under a strict application of the “ Règles ”, from the sinking of the name “ Conchidium ” as a synonym of “ Pentamerus ” Sowerby, 1813 (Class Brachiopoda) and the transfer of the latter name to the genus now known as “ Conchidium ”**

By F. ELIZABETH S. ALEXANDER, M.A., Ph.D.  
(*Sedgwick Museum, Cambridge University, Cambridge*)

The object of the present application is to ask the International Commission on Zoological Nomenclature to prevent the serious confusion, both in systematic zoology and in stratigraphy, which would result from the strict application of the *Règles* to the generic names *Pentamerus* Sowerby (J.), 1813, and *Conchidium* Oehlert, 1887.

**I. History of the generic name “ Conchidium ” commonly, though erroneously, attributed to Linnaeus**

2. The earliest reference to the generic name *Conchidium* which has so far been traced is in Linnaeus' *Museum Tessinianum* (: 90, pl. V, fig. 8) published in 1753, where a species is described (with a locality) and figured under the accidentally binominal name *Conchidium biloculare*. The species so described and figured is perfectly recognisable and is the species named *Anomia bilocularis* by Hisinger in 1799. Neither the generic name *Conchidium* nor the trivial name *biloculare*, as published by Linnaeus in the *Mus. Tess.*, possesses any availability in zoological nomenclature, since that work, being published prior to 1758, was published before the starting point of zoological nomenclature (Article 26).

3. The next occasion on which the generic name *Conchidium* appears is in 1768 in volume 3 of the 12th edition of the *Systema Naturae*.



In that volume a trinomial system of nomenclature is used and accordingly the name *Conchidium* acquired no standing in zoological nomenclature in virtue of being so published. (I understand that Mr. R. Winckworth submitted an application supported by the Nomenclature Committee of the Malacological Society of London, asking the Commission to remove all doubts regarding the availability of names published in this volume by suppressing it for nomenclatorial purposes (Commission File Z.N.(S.) 418). I feel strongly that this course is desirable since, until this is done, confusion is bound to arise at least so far as the Brachiopods are concerned.)

4. As already mentioned, Hisinger in 1799 gave the name *Anomia bilocularis* to the species described and figured by Linnaeus in 1753 under the name *Conchidium biloculare*. In doing so, Hisinger added the note that the species had previously been referred to other genera; his note reads: "Helminth. Patellaria. Conchidium". He did not, however, either accept or adopt the name *Conchidium* and accordingly, under *Opinion 5*, he did not bestow any availability under the *Règles* on the pre-1758 name *Conchidium*. (See *Bull. zool. Nomencl.* 4 : 150 for the decision taken in Paris in 1948 to incorporate the substance of *Opinion 5* in the *Règles*.)

5. The term "Conchidium" was next used by Wahlenberg in 1821, where in a general description of Septate Anomites reference is made to the group of the "Conchidiums". Wahlenberg used the word "Conchidium" as a specific trivial name, applying the specific name *Anomites conchidium* to the species which he was then describing. The fact that the word "conchidium" was there printed with a capital initial letter (as "Conchidium") misled Sherborn (1926, *Index Anim.* (Pars secund) : 1444, line 11) into thinking that Wahlenberg had used this word as a generic name. (The description given by Wahlenberg and the references that he gave make it clear that the species which he was describing was *Anomia bilocularis* Hisinger, 1799.)

6. The next appearance in the literature of the name *Conchidium* was in 1848 when it was used by Bronn (1 : 322). Like Hisinger (1799), Bronn (1848) did not reinforce this pre-1758 name by acceptance or adoption (as required by *Opinion 5*) and accordingly he conferred no availability upon this name.

7. At last in 1887 we come upon the first occasion when the name *Conchidium* was published in conditions which satisfy the requirements of Article 25; this was by Oehlert, who (1) gave characters for the genus, (2) designated what he called "*Conchidium bilocularis* Linn." as the type species of this genus. As already explained, the pre-1758 name *Conchidium biloculare* possesses no status in zoological nomenclature, but that does not invalidate Oehlert's selection, as the type

species of *Conchidium*, of the species represented by the foregoing invalid name, that is, *Anomia bilocularis* Hisinger, 1799.

8. Under the *Règles*, therefore, *Anomia bilocularis* Hisinger, 1799, is the type species of the genus *Conchidium*, and has been so accepted by all subsequent authors, some of whom, however, have continued to attribute this generic name to Linnaeus instead of to Oehlert.

## II. History of the generic name "Pentamerus" Sowerby (J.), 1813

9. The generic name *Pentamerus* Sowerby (J.), 1813 (*Min. Conch.* 1 : 73\*—76\*) was published without a designated type species ; three nominal species were referred to this genus, of which the first was *Pentamerus knighti* (incorrectly spelt *knightii*), a new species, and the third *Pentamerus laevis*, also a new species.

10. In 1853, Davidson (: 97) selected *Pentamerus knighti* Sowerby (J.), 1813, to be the type species of the genus *Pentamerus* Sowerby, 1813. This is a valid selection under Rule (g) in Article 30 of the *Règles*, and accordingly this species is the type species of this genus.

11. In 1894 (: 236—240), Hall and Clarke revised the genera *Pentamerus* and *Conchidium* and, in doing so, selected *Pentamerus oblongus* Sowerby (J. de C.), 1839, as the type species of *Pentamerus* Sowerby (J.), 1813, either being ignorant of, or ignoring, the earlier selection by Davidson (1853) of *Pentamerus knighti* Sowerby (J.), 1813, as the type species of this genus. The nominal species *Pentamerus oblongus* Sowerby (J. de C.), 1839, was not (and, by reason of the date of the publication of its name, could not have been) one of the nominal species originally included in the genus *Pentamerus* Sowerby, but it was regarded as such by those authors because, following Davidson (1867), they regarded the names *Pentamerus oblongus* Sowerby (J. de C.), 1839, and *Pentamerus laevis* Sowerby (J.), 1813, as names given to the adult and immature forms respectively of a single species, and the latter name had been cited by James Sowerby when he first published the name *Pentamerus*.

12. Although, as shown above, the action by Hall and Clarke was entirely contrary to the present *Règles*, it has been generally followed by subsequent authors, except that Schuckert and Le Vene (1929) and Schuckert and Cooper (1932) treated the nominal species *Pentamerus laevis* Sowerby (J.), 1813, and not *Pentamerus oblongus* Sowerby (J. de C.), 1839, as the type species of the genus *Pentamerus*.

## III. The result which would follow from the strict application of the "Règles" in the present case

13. We have seen in the preceding Section that under the *Règles* (1) the type species of *Conchidium* Oehlert, 1887, is *Anomia bilocularis*

Hisinger, 1799 (the species currently accepted as such) and that the type species of *Pentamerus* Sowerby (J.), 1813, is *Pentamerus knighti* Sowerby (J.), 1813 (a species which has never been accepted as such by any author, other than Davidson in 1853) and not *Pentamerus laevis* Sowerby (J.), 1813, or *Pentamerus oblongus* Sowerby (J. de C.), 1839, which are commonly accepted as forms of a single species and one or other of which is universally accepted as the type species of *Pentamerus*.

14. According to currently accepted taxonomic ideas, the species *Anomia bilocularis* Hisinger, 1799, and *Pentamerus knighti* Sowerby (J.), 1813, are congeneric with one another and are both referable to the genus *Pentamerus* Sowerby (J.), 1813. The acceptance of the application of the *Règles* in this way would inevitably lead to the greatest confusion: (1) the well-known generic name *Conchidium* would disappear as a synonym of *Pentamerus*; (2) the species now referred to the genus *Pentamerus* would have to be placed in a genus with a different name; (3) the names of the Order, Superfamily and Family would have to be changed to conform with the change in the generic name; (4) stratigraphical literature would suffer also through the beds known as "Pentamerus beds" being characterised (as they would have to be) by some genus other than *Pentamerus*, while the genus which in future would have to be called by the name *Pentamerus* would be a genus occurring in a different horizon.

#### IV. Action by the International Commission on Zoological Nomenclature recommended

15. In view of the intolerable confusion both in systematic zoology and in stratigraphical literature to which the strict application of the *Règles* in the present case would at once give rise, I think it essential to ask the International Commission on Zoological Nomenclature to use its Plenary Powers in order to give valid force to current practice.

16. Before formulating my proposals for this purpose, I think that consideration should be given to the question whether *Pentamerus laevis* Sowerby (J.), 1813, or *Pentamerus oblongus* Sowerby (J. de C.), 1839, should be designated as the type species of the genus *Pentamerus* Sowerby (J.), 1813. The only advantage of selecting the first of these species as the type species is that it is one of the nominal species actually placed in the genus *Pentamerus* by Sowerby when he first published that generic name. Against this must be set the consideration that, although it is probable that the name *Pentamerus laevis* applies to an immature form of the species, the adult form of which was named *Pentamerus oblongus* by Sowerby (J. de C.) in 1839, there can be no certainty about this identification, as James Sowerby's holotype of *laevis* cannot be traced and in consequence the name *Pentamerus laevis* Sowerby (J.) is at present a *nomen dubium*. If at some future date the holotype of *P. laevis* were to be found and it was shown that this name



was applicable to some species not congeneric with *P. oblongus*, fresh confusion would arise in the use of the generic name *Pentamerus*. In these circumstances it appears to me that it would be most unwise to ask the Commission to use its Plenary Powers for the purpose of designating the doubtfully identifiable *P. laevis* as the type species of *Pentamerus* and that the only way of eliminating all risk of further confusion would be for the Commission to use its Plenary Powers to designate *P. oblongus* as the type species of this genus.

17. Having regard to the decision taken by the International Commission in Paris in 1948 (*Bull. zool. Nomencl.* 4 : 355) that *Opinions* should deal with all questions that arise in connection with any given case submitted, I think it right to draw attention to the following generic names which are involved in the synonymy of the name *Pentamerus* Sowerby : (1) *Gypidia* Dalman, 1828, is an uncalled-for substitute for the name *Pentamerus* Sowerby, of which therefore it is an objective synonym ; (2) the names *Trimurus* Caldwell, 1934, and *Miopentamerus* Alexander, 1936, which were both accidentally published in an attempt strictly to apply the *Règles* in the present case, are both *nomina nuda*; (3) *Miopentamerus* Woods, 1937, which was published with *Pentamerus oblongus* Sowerby, 1839, as the sole cited species, which is thus its type species by monotypy, will become an objective synonym of *Pentamerus* Sowerby (J.), 1813, if, as I recommend below, the Commission under its Plenary Powers designates *P. oblongus* as the type species of *Pentamerus*.

18. In the light of the considerations set forth in the present application and, in particular, the need for avoiding the serious confusion which would result from the strict application of the *Règles* in the present case, I ask the International Commission on Zoological Nomenclature :—

(1) to rule :—

- (a) that neither Hisinger (1799) nor Bronn (1848) reinforced the pre-1758 generic name *Conchidium* by adoption or acceptance (*Opinion* 5) and therefore that that name acquired no rights in zoological nomenclature in virtue of having been published by either of those authors ;
- (b) that the term *Conchidium*, as published by Wahlenberg in 1821, was not used as a generic name and therefore that the alleged generic name *Conchidium* Wahlenberg, 1821, is a cheironym ;
- (c) that the generic name *Conchidium* ranks in zoological nomenclature from Oehlert (1887), the first author by whom it was published in conditions which satisfy the requirements of Article 25 of the *Règles*;

(2) to use its Plenary Powers :—

- (a) to set aside all selections of type species for the genus *Pentamerus* Sowerby (J.), 1813, made prior to the proposed decision ;
- (b) to designate *Pentamerus oblongus* Sowerby (J. de C.), 1839, to be the type species of *Pentamerus* Sowerby, 1813 ;
- (c) to suppress for the purposes of the Law of Priority the trivial name *laevis* Sowerby (J.), 1813, as published in the binominal combination *Pentamerus laevis*;

(3) to place the under-mentioned generic names on the *Official List of Generic Names in Zoology*:—

- (a) *Conchidium* Oehlert, 1887 (type species, by original designation : *Anomia bilocularis* Hisinger, 1799) (gender of generic name : neuter) ;
- (b) *Pentamerus* Sowerby (J.), 1813 (type species, by designation under the Plenary Powers as proposed in (2)(b) above : *Pentamerus oblongus* Sowerby (J. de C.), 1839) (gender of generic name : masculine).

(4) to place the under-mentioned generic names and alleged generic names on the *Official Index of Rejected and Invalid Generic Names in Zoology*:—

- (a) the under-mentioned generic names proposed, under (1)(a) above, to be declared to possess no status in zoological nomenclature :—
  - (i) *Conchidium* Hisinger, 1799 ;
  - (ii) *Conchidium* Bronn, 1848 ;
- (b) *Conchidium* Wahlenberg, 1821, proposed under (1)(b) to be declared a cheironym ;
- (c) *Gypidia* Dalman, 1828 (an objective synonym of *Pentamerus* Sowerby, 1813) ;
- (d) the under-mentioned *nomina nuda*:—
  - (i) *Trimurus* Caldwell, 1934 ;
  - (ii) *Miopentamerus* Alexander (*née* Caldwell), 1936 ;
- (e) *Miopentamerus* Woods, 1937 (type species, by monotypy : *Pentamerus oblongus* Sowerby, 1839) (an objective synonym of *Pentamerus* Sowerby (J.), 1813, when, as recommended in (2)(b) above, the foregoing species is designated under

the Plenary Powers as the type species of *Pentamerus* Sowerby);

(5) to place the under-mentioned trivial names on the *Official List of Specific Trivial Names in Zoology*:—

(a) *bilocularis* Hisinger, 1799, as published in the binominal combination *Anomia bilocularis*;

(b) *knighti* Sowerby (J.), 1813, as published in the binominal combination *Pentamerus knighti*, the trivial name then being incorrectly given as *knightii*<sup>1</sup>;

(c) *oblongus* Sowerby (J. de C.), 1839, as published in the binominal combination *Pentamerus oblongus*;

(6) to place the trivial name *laevis* Sowerby (J.), 1813, as published in the binominal combination *Pentamerus laevis*, as proposed under (2)(c) above, to be suppressed under the Plenary Powers, on the *Official Index of Rejected and Invalid Specific Trivial Names in Zoology*.

#### References

ALEXANDER (*Née* Caldwell), 1936, "A revision of the genus *Pentamerus* J. Sowerby 1813 . . .". *Abstr. geol. Soc. Lond.* No. 1315 : 116—117

BRONN, 1848, *Index Palaeontologicus oder Uebersicht der bisjetzt bekannten Fossilen Organismen* 1 : 322

CALDWELL, 1934, "Studies in the Aymestry". *Abstr. Diss. Univ. Camb.* 1933—1934 : 56

DALMAN, 1828, Uppställning och Beskrifning af de i Sverige funne Terebratuliter. *Kongl. Vetenskaps. Academicus Handlingar., Fir Ar* 1827 : 97 and footnote 19

DAVIDSON, 1853, British Fossil Brachiopoda Vol. 1, General Introduction. *Mon. Pal. Soc.* : 97

———, 1867, British Fossil Brachiopoda Vol. 3, Part VII Silurian, No. 2. *Mon. Pal. Soc.* : 153

HALL and CLARKE, 1894, An Introduction to the study of the genera of Palaeozoic Brachiopoda. *Nat. Hist. N. Y., Palaeontology* 8 (2) : 231—240

<sup>1</sup> This statement was correct at the time of the preparation of Dr. Alexander's application, but, as explained in paragraph 16 below, the provisions in the *Règles* on this question were amended by the Fourteenth International Congress of Zoology, Copenhagen, 1953.

- HISINGER, 1799, *Minerographiske anmarkingar ofver Gottland. Nya Handl. Kongl. Vetén. Acad.* **19** : 285
- LINNAEUS, 1753, *Museum Tessinianum* : 90, pl. V, fig. 8
- LINNAEUS, 1768, *Systema Naturae* (ed. 12) **3**
- OEHLERT, 1887, in Fischer's *Manuel de Conchyliologie et de Palaeontologie Conchyliologique* Part XI : 1311
- ST. JOSEPH, 1938, The Pentameracea of the Oslo Region. *Norsk. geol. Tidsskr.* : 256—265 and 299
- SCHUCHERT and COOPER, 1932, "Synopsis of the Brachiopod genera . . ." *Am. J. Sci.* (5) **22** : 241—251
- and ———, Brachiopod genera of the sub-orders Orthoidea and Pentameroidea. *Mem. Peabody Mus. Nat. Hist.* **4**, pt. 1
- SCHUCHERT and LE VENE, 1929, *Fossilium Catalogus I Animalia Pars 42 Brachiopoda* : 44, 95
- SHERBORN, C. D., 1925, *Index Animalium Pars VI* : 1444
- SOWERBY, J., 1813, *The Mineral Conchology of Great Britain . . . .* **1** : 73—76
- SOWERBY, J. DE C., 1839, in Murchison's *The Silurian System . . . .* Part II : 615, pl. xix, fig. 10
- WAHLENBERG, 1821, *Petrificata Tellaris svecanae examinata. Nova Acta Regiae Soc. Scient. Upsal.* **8** : 63, 67
- WOODS, 1937, *Palaeontology* : 209—210

## II.—THE SUBSEQUENT HISTORY OF THE CASE

2. *Registration of the present application:* On receipt of Dr. Alexander's communication of March 1947, the case of the names *Conchidium* and *Pentamerus* was given the Registered Number Z.N.(S.) 286.

3. *Publication of the present application:* Owing to the limited amount of time available, it was not possible for the International Commission at its Session held in Paris in 1948 to consider all the cases then awaiting attention, and, partly for this reason and because of the complicated nature of the problems involved, the case of the name *Conchidium* was one of those which it was decided not to place before the Commission at that Session.

In the period immediately following, it was necessary to devote the whole of the resources of the Commission to the preparation and publication of the Official Records of the Paris Session, and it was not until the autumn of 1950 that it was possible to resume preparations for the publication in the *Bulletin of Zoological Nomenclature* of applications on individual nomenclatorial cases submitted to the Commission for decision. Correspondence took place between the Secretary and the applicant in September and October 1950 on the question on the form and scope of the application required in this case, and on 10th October 1950 the application revised in the light of these discussions was submitted to the Commission. It was at once sent to the printer, and publication took place on 20th April 1951 (Alexander, 1951, *Bull. zool. Nomencl.* 2 : 89—94).

4. *Support received prior to publication:* Prior to the publication of the present application in the *Bulletin*, support for it had been received from the following specialists :—(a) Dr. Thomas W. Amsden (*The Johns Hopkins University, Department of Geology, Baltimore, Maryland, U.S.A.*) ; (b) Dr. J. E. St. Joseph (*Cambridge University, Department of Geology, Sedgwick Museum, Cambridge*) ; (c) Dr. G. Arthur Cooper (*Smithsonian Institution, United States National Museum, Washington, D.C., U.S.A.*). The communications so received are given in the immediately following paragraphs.

5. *Support received from Dr. Thomas W. Amsden (The Johns Hopkins University, Department of Geology, Baltimore, Maryland, U.S.A.):* On 31st October 1950, Dr. Thomas W. Amsden (*The Johns Hopkins University, Department of Geology, Baltimore, Maryland, U.S.A.*) wrote the following letter in support of the present application (Amsden, 1951, *Bull. zool. Nomencl.* 2 : 96) :—

I received your letter of 24th October with the enclosed copy of the application by Dr. Elizabeth Alexander pertaining to the names *Conchidium* and *Pentamerus*. The problem concerned with these generic names is a complicated one and it seems to me that Dr. Alexander has proposed the best possible solution.

6. *Support received from Dr. J. E. St. Joseph (Cambridge University, Department of Geology, Sedgwick Museum, Cambridge):* On 7th November 1950, Dr. J. E. St. Joseph (*Cambridge*)



University, Department of Geology, Sedgwick Museum, Cambridge) wrote the following letter in support of the present application (St. Joseph, 1951, *Bull. zool. Nomencl.* 2 : 95) :—

I understand that Mrs. Elizabeth Alexander has submitted to the International Commission on Zoological Nomenclature an application concerning the names of the fossil brachiopod genera *Conchidium* auctt. and *Pentamerus* auctt.

Since I have also worked on these genera and have had an opportunity of reading through Mrs. Alexander's statement in the form in which it has been submitted to the Commission, I write to say that I am entirely in agreement with the principles of the case as she has outlined them, and that I hope that action may be taken to render valid the usage of these generic names in the way they are customarily used at present.

7. *Support received from Dr. G. Arthur Cooper (Smithsonian Institution, United States National Museum, Washington, D.C., U.S.A.)*; On 30th November 1950, Dr. G. Arthur Cooper (Curator, Invertebrate Paleontology and Paleobotany, Smithsonian Institution, United States National Museum, Washington, D.C., U.S.A.) wrote the following letter in support of the present application (Cooper, 1951, *Bull. zool. Nomencl.* 2 : 96) :—

Dr. Helen Muir-Wood, who is visiting here at the U.S. National Museum, turned over to me your letter concerning *Conchidium* and *Pentamerus*. As far as I am personally concerned, I would be agreeable to the Commission using its Plenary Powers to designate *Pentamerus oblongus* Sowerby, 1839, as type species of *Pentamerus* and to suppress the name *Pentamerus laevis*, which has priority over *P. oblongus*.

8. *Issue of Public Notices*: Under the revised arrangements approved by the Thirteenth International Congress of Zoology, Paris, 1948 (1950, *Bull. zool. Nomencl.* 4 : 51—56), Public Notice of the possible use by the International Commission on Zoological Nomenclature of its Plenary Powers in the present case was given on 20th April 1951, both in Part 3 of volume 2 of the *Bulletin of Zoological Nomenclature*, the Part in which Dr. Alexander's application was published, and to the other prescribed serial publications. The publication of these Notices elicited no objection to the action proposed.

9. *Support received after the publication of the present application:* Letters of support for the present application were received from the following specialists after the publication of the present application in the *Bulletin of Zoological Nomenclature* :—  
(a) Dr. Herta Schmidt (*Natur-Museum u. Forschungs-Institut Senckenberg, Senckenberg-Anlage, Frankfurt a.M., Germany*) ;  
(b) the Joint Committee on Zoological Nomenclature for Paleontology in America (by a majority). The communications so received are given in the immediately following paragraphs.

10. *Support received from Dr. Herta Schmidt (Natur-Museum u. Forschungs-Institut Senckenberg, Senckenberg-Anlage, Frankfurt a.M., Germany):* On 4th June 1951, Dr. Herta Schmidt (*Natur-Museum u. Forschungs-Institut Senckenberg, Senckenberg-Anlage, Frankfurt a.M.*) wrote the following letter in support of the present application (Schmidt, 1952, *Bull. zool. Nomencl.* 6 : 179) :—

Die von Dr. Elizabeth Alexander vorgeschlagene Lösung zur Beseitigung der bestehenden Unklarheiten erscheint mir zweckmässig.

11. *Support received from the Joint Committee on Zoological Nomenclature for Paleontology in America:* On 9th April 1952 there was received in the Office of the Commission a large number of letters from Professor G. Winston Sinclair (then of the *University of Michigan, Ann Arbor, Michigan, U.S.A.*), Chairman of the Joint Committee on Zoological Nomenclature for Paleontology in America, submitting statements of the views of members of the Committee on applications published in the *Bulletin of Zoological Nomenclature*. It appeared that the despatch of these letters had been held back by Professor Sinclair until he was in a position to send the entire set to the Commission, and it was presumably on this account that the letter relating to the present case, though dated 6th February 1952, was not received until 9th April. By that time the Prescribed Period of Notice had expired, and the Voting Paper (V.P.(52)14) relating to the present case had already been prepared. It was therefore impossible to include in that Voting Paper a reference to Professor Sinclair's letter, but, when a few days later the Voting Paper was despatched (15th April), a supplementary sheet containing the particulars included in Professor Sinclair's letter was issued to the Members of the Commission, who were thus placed in possession of the views of the Joint Committee at the same time that they received

the Voting Paper relating to the present case. The following is the text of Professor Sinclair's letter :—

The Joint Committee on Zoological Nomenclature for Paleontology in America has considered this subject, and I wish to inform you that, being polled, they voted : To support the petition (six) :—(1) Katherine V. W. Palmer ; (2) Bryan Patterson ; (3) J. Marvin Weller ; (4) Bobb Schaeffer ; (5) John B. Reeside, Jr. ; (6) R. C. Moore. To oppose the petition (five) :—(1) Don L. Frizzell ; (2) A. Myra Keen ; (3) John W. Wells ; (4) Siemon W. Muller ; (5) G. Winston Sinclair.

### III.—THE DECISION OF THE INTERNATIONAL COMMISSION ON ZOOLOGICAL NOMENCLATURE

12. *Issue of Voting Paper V.P.(52)14* : On 15th April 1952, a Voting Paper (V.P.(52)14) was issued in which the Members of the Commission were invited to vote either for, or against, the proposal " relating to the names *Conchidium* and *Pentamerus* as specified in Points (1) to (6) on pages 93 and 94 of volume 2 of the *Bulletin of Zoological Nomenclature* " [i.e. the Points specified in paragraph 18 of the application reproduced in the first paragraph of the present *Opinion*].

13. *The prescribed Voting Period* : As the foregoing Voting Paper was issued under the Three-Month Rule, the prescribed Voting Period closed on 15th July 1952.

14. *Particulars of the Voting on Voting Paper V.P.(52)14* : The state of the voting on Voting Paper V.P.(52)14 at the close of the prescribed Voting Period was as follows :—

(a) *Affirmative Votes had been given by the following seventeen (17) Commissioners (arranged in the order in which Votes were received)* :

Hering ; Calman ; Riley ; Dymond ; Esaki ; do  
Amaral ; Hankó ; Bonnet ; Lemche ; Vokes ;  
Pearson<sup>2</sup> ; Cabrera ; Bradley ; Boschma ; Stoll ;  
Mertens ; Hemming ;

<sup>2</sup> Commissioner Pearson exercised in this case the right conferred by the Thirteenth International Congress of Zoology in Paris, 1948, under which a Commissioner may, if he so desires, signify his willingness to support the view, or the majority view, of other members of the Commission (1950, *Bull. zool. Nomencl.* 4 : 50—51).

(b) *Negative Votes:*

None ;

(c) *Voting Paper V.P.(52)14 was not returned by one (1) Commissioner:*

Jaczewski.

**15. Declaration of Result of Vote:** On 16th July 1952, Mr. Hemming, Secretary to the International Commission, acting as Returning Officer for the Vote taken on Voting Paper V.P.(52)14, signed a Certificate that the Votes cast were as set out in paragraph 14 above and declaring that the proposal submitted in the foregoing Voting Paper had been duly adopted and that the decision so taken was the decision of the International Commission in the matter aforesaid.

**16.** At the time when the present application was submitted to, and approved by, the International Commission, the *Règles* provided that, where, contrary to the provisions of the third paragraph of Article 14, a specific name based upon the modern patronymic of a man was formed in the genitive singular otherwise than by the addition of the letter “-i” to the patronymic concerned, the error so committed was to be subject to automatic correction by later authors (1950, *Bull. zool. Nomencl.* **4** : 67—68). This problem arose in the present application in connection with the specific name of the nominal species *Pentamerus knightii* Sowerby (J.), 1813, which the applicant asked should be placed on the *Official List of Specific Trivial Names in Zoology* in the corrected form *knighti*. The foregoing was one of the proposals which was submitted to, and approved by the Commission in Voting Paper V.P.(52)14 (paragraphs 12—15) in 1952. This aspect of Article 14 was further considered by the Fourteenth International Congress of Zoology, Copenhagen, 1953, which decided to replace the provision described above by a provision that in a case of this kind “the terminations “-i” and “-ii” are” to be treated as “permissible variants, the differences between them having no nomenclatorial significance” (1953, *Copenhagen Decisions zool. Nomencl.* : 54). Since the foregoing decision

applies to all names of the type discussed above, it supersedes the decision taken on this point by the Commission in its Vote on Voting Paper V.P.(52)14.

17. On 7th March 1954, Mr. Hemming prepared the Ruling given in the present *Opinion* and at the same time signed a Certificate that the terms of that Ruling were in complete accord with the proposal approved by the International Commission in its Vote on Voting Paper V.P.(52)14, as modified in respect of the formation of the specific name *knightii* Sowerby (J.), 1813, as published in the combination *Pentamerus knightii*, in accordance with the decision of the Fourteenth International Congress of Zoology, Copenhagen, 1953, specified in paragraph 16 above.

18. The following are the original references for the names which appear in the Ruling given in the present *Opinion*:—

*bilocularis*, Anomia, Hisinger, 1799, *K. Vetensk. Acad. Nya Handl.* **19** : 285

*Conchidium* Hisinger, 1799, *K. Vetensk. Acad. Nya Handl.* **19** : 285

*Conchidium* Wahlenberg, 1821, *Nov. Acta. Soc. Sci. Upsal.* **8** : 63, 67

*Conchidium* Bronn, 1848, *Index palaeont.* **1** : 322

*Conchidium* Oehlert, 1887, in Fischer's *Manuel Conchyliologie* (11) : 1311

*Gypidia* Dalman, 1828, *K. Vetensk. Acad. Handl.* **1827** : 93

*knightii*, *Pentamerus*, Sowerby (J.), 1813, *Min. Conch.* **1** : 73\*

*laevis*, *Pentamerus*, Sowerby (J.), 1813, *Min. Conch.* **1** : 76\*

*Miopentamerus* Alexander (née Caldwell), 1936, *Abstr. geol. Soc. Lond.* **1315** : 116—117

*Miopentamerus* Woods, 1937, *Palaeontology* : 209—210

*oblongus*, *Pentamerus*, Sowerby (J. de C.), 1839, in Murchison (R.I.), *Silurian System* : 641, pl. 19, fig. 10

*Pentamerus* Sowerby (J.), 1813, *Min. Conch.* **1** : 73\*, 76\*

*Trimurus* Caldwell, 1934, *Abstr. Diss. Univ. Cambridge* **1933—1934** : 56

19. At the time of the adoption of the Ruling given in the present *Opinion*, the expression prescribed for the second portion



of the binomen which constitutes the scientific name of a species was the expression "trivial name" and the *Official List* reserved for recording such names was styled the *Official List of Specific Trivial Names in Zoology*, the word "trivial" appearing also in the title of the *Official Index* reserved for recording rejected and invalid names of this category. Under a decision taken by the Fourteenth International Congress of Zoology, Copenhagen, 1953, the expression "specific name" was substituted for the expression "trivial name" and corresponding changes were made in the titles of the *Official List* and *Official Index* of such names (1953, *Copenhagen Decisions zool. Nomencl.* : 21). The changes in terminology so adopted have been incorporated in the Ruling given in the present *Opinion*.

20. The prescribed procedures were duly complied with by the International Commission on Zoological Nomenclature in dealing with the present case, and the present *Opinion* is accordingly hereby rendered in the name of the said International Commission by the under-signed Francis Hemming, Secretary to the International Commission on Zoological Nomenclature, in virtue of all and every the powers conferred upon him in that behalf.

21. The present *Opinion* shall be known as *Opinion Two Hundred and Ninety-Seven (297)* of the International Commission on Zoological Nomenclature.

DONE in London, this Seventh day of March, Nineteen Hundred and Fifty-Four.

*Secretary to the International Commission  
on Zoological Nomenclature*

FRANCIS HEMMING

